

*Amendments to the Claims*

The listing of claims will replace all prior versions, and listings of claims in the application.

1-135. (cancelled)

136. (currently amended) A method for detecting the presence of a target molecule in a biological or environmental sample comprising:

(a) synthesizing multiple copies of detectable oligonucleotides through abortive reiterative synthesis on a nucleic acid template; and

(b) detecting said oligonucleotides, thereby determining the presence of said target molecule in said sample.

137. (previously presented) The method of claim 136, wherein said abortive reiterative synthesis is abortive RNA transcription on a DNA template.

138. (previously presented) The method of claim 137, wherein said abortive RNA transcription comprises:

(a) incubating said DNA template with an initiator and an RNA-polymerase;

(b) synthesizing multiple reiterative oligonucleotide transcripts from said DNA template, wherein said initiator is extended until said transcript is terminated, causing multiple reiterative oligonucleotide transcripts to be synthesized; and

(c) detecting or quantifying said multiple reiterative oligonucleotide transcripts.

139. (previously presented) The method of claim 138, wherein said transcript termination occurs through nucleotide deprivation.

140. (previously presented) The method of claim 138, wherein said transcript termination occurs through incorporation of a nucleotide analog.

141. (previously presented) The method of claim 138, wherein said transcript termination occurs because of a specific transcription termination signal in the template.

142. (previously presented) The method of claim 138, wherein said DNA template is incubated with a target site probe specific for a region on said target polynucleotide.

143. (previously presented) The method of claim 142, wherein said target site probe and said DNA template form two substantially complementary strands that form a transcription bubble region in the presence of an RNA polymerase.

144. (previously presented) The method of claim 142, wherein said target site probe and said DNA template form a bubble complex comprising a first double-stranded region, a second region of two unpaired strands, and a third region which is double-stranded.

145. (previously presented) The method of claim 136, wherein said target molecule comprises said nucleic acid template.

146. (previously presented) The method of claim 136, wherein said target molecule is a protein.

147. (previously presented) The method of claim 136, wherein said nucleic acid template comprises an abortive promoter cassette.

148. (new) The method of claim 140, wherein said sample is a biological sample.

149. (new) The method of claim 140, wherein said sample is an environmental sample.